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The Cucamonga Middle School web page: Using parent input to redesign an existing school web page

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THE CUCAMONGA MIDDLE SCHOOL WEB PAGE:

USING PARENT INPUT TO REDESIGN AN EXISTING SCHOOL WEB PAGE

A Project

Presented to the

Faculty of

California State University,

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In Partial Fulfillment

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in

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Paul Thomas Myers, Jr.

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ABSTRACT

This project focused on the enhancement of an existing school web page. Schools have jumped on the bandwagon in record numbers in the past couple of years publishing web pages about their schools. Cucamonga Middle School is no exception, having first published a web site in 1995.

Utilizing information gathered from a survey, the author/webmaster created a redesign of the existing school web page. The wants and needs of parents, as noted in the survey, were the driving force behind the redesign.

Enhancements to the web page included teacher pages with weekly homework updates and educational links, a better news section and on-line animal cams.

The formative evaluation indicated many positive responses from parents about the web site. The teacher pages were well received by parents, especially the homework listings. Parents hoped that this aspect of the homepage would continue to expand in the future.

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INTRODUCTION

Background information

On an almost daily basis, the Internet and the World Wide Web have been growing in what seems like logarithmic proportions. As these important information tools have continued to grow, school districts and individual schools have been jumping on the bandwagon in record numbers by creating their own homepages, basically, a digital snapshot or portfolio of what they have to offer to the outside community. The learning curve is large, as some schools have just started this process, while others have been engaged in such development for several years.

Internet access in school and outside of school has been on the rise as well. In 1994, "some believe that by the year 2000, most schools in the United States and many homes will have Internet connections" (Merrill et al., 1996, p. 214). Individual on-line access and school access to the Internet has been growing in the United States even more quickly than imagined. According to a Department of Commerce study, "the share of individuals using the Internet rose by a third, from 32.7% in December 1998 to 44.4% in August 2000" (Department of Commerce, 2000, p.

xv). The report goes on to state that if the numbers continue at the current rate, more than half of all people living in the United States will have access to the Internet by June 2001 (DOC, 2000). As parents and students are more apt to utilize the Internet and World Wide Web, it becomes imperative for schools to be technologically savvy and ready to meet the needs of school children in the 21st century.

More and more, schools with on-line access are becoming the norm across the nation rather than the exception. Web66, a project of the University of Minnesota College of Education and Human Development, maintains one of the oldest and most complete listing of school web servers on the World Wide Web. Schools publish web pages and in turn, register their homepages with Web66. In September 1994, when Web66 published its first school homepage listing, there were a total of 70 schools listed and 15 school districts (Collins, 2001). A year later, in 1995, Cucamonga Middle School published its first Internet homepage and also registered it with Web66 among others. Today, Web66 lists over thirteen thousand individual school homepages (Collins, 2001).

When Cucamonga Middle School first published its homepage, there was a single dedicated phone line connected to a server via a 28.8 K modem at the school. Many other schools within the district had no access at all. Over the past six years, the Central School District has increased its stake in technology significantly. Each school has a Local Area Network (LAN), a connecting T-1 line, and is connected to the district office server via a Wide Area Network (WAN). Each school has its own homepage, located on the district server, and most are updated on a regular basis.

At Cucamonga Middle School, each room has a teacher workstation, connected to the Internet. Many classrooms have other student workstations also connected to the Internet. The school has a homework hotline (voice-mail), which teachers utilize to post homework. Teachers usually post information on the homework hotline on a daily or weekly basis. There is also one Macintosh computer lab and one PC/Windows environment computer lab for students to use to create multimedia projects and to conduct research via the Internet. The school homepage can be a window for students to begin this research.

The school's homepage has been through many design changes over the past 6 years and one change in authorship since its inception. By inserting a counter on the school's homepage, it has been possible to determine viewer usage and number of visitors. The information from the counter indicated the homepage averaged approximately 160 page views per week during the 1999-2000 school year (TheCounter.com, 2001).

The counter yielded other details besides number of visitors. Almost 24 percent of visitors were return visitors to the page. The counter counted a return visitor as one who clicked back to the homepage from another page during the initial visit or came back to the page later during the same browsing session. It could not be determined if the visitor returned on a different day. The counter also allowed tracking of domain names, which detailed geographical information about visitors. Although Cucamonga Middle School's homepage received visitors, during the same time period, from as far away as Canada, Saudi Arabia and Estonia (TheCounter.com, 2001), the vast majority of page views (94%) came from the United States and most likely from within the city of Rancho Cucamonga, California. What the counter did not tell us was whether

the visitor has been satisfied by their visit to the school's homepage or had received the information for which they were looking.

Statement of the Problem

Is the Cucamonga Middle School homepage utilizing its homepage to transmit necessary and desired information to viewers in an effective manner? By viewing other school's web pages, it has been noticed that the Cucamonga Middle School homepage was quite like other school pages listed at the Web66 homepage. Most schools have links to teacher/staff pages and have an activities calendar listing upcoming events. They have usually included educational resources pages and a way to contact administration and faculty via e-mail.

Trinkle and Merriman (2000) estimate that there are several hundred million individual web pages on the World Wide Web with close to 50,000 on just the American Revolution. With this many pages out there, it becomes almost impossible to sift through to find good source material. As Caine and Caine (1997) suggest, "the sources of information ... are now becoming so vast that they threaten to engulf classrooms and schools" (p. 47). An educational links section on a school homepage would offer

some sort of starting point for students who are conducting research. A links section, set up by teachers in advance, would allow students to streamline their research to some "tried and true" sources and probably lead to more productive student research in the long run.

The Cucamonga Middle School homepage has contained many aspects of typical school homepages, i.e.: listing of teachers with e-mail addresses for contact, sports page, monthly calendar, school boundaries, as well as an information page and an educational links page.

What had never been done, prior to the conception of this project, was to survey viewers to discern whether the Cucamonga Middle School homepage was giving viewers what they wanted. By the use of a survey of parents whose children attend Cucamonga Middle School, the author was able to discover exactly what viewers thought should be on the homepage. The survey provided an assessment tool, which allowed the author/webmaster to enhance and improve the school's web page.

Project Overview

The purpose of this project was to improve the existing Cucamonga Middle School homepage. A parent survey

was used as an assessment tool to determine what modifications and enhancements to the web page were needed. The project included improved department pages, with added teacher pages and educational links, a better news section, on-line animal-cams, and faster loading pages with fewer graphics for a better viewing experience.

The department pages were streamlined and made easier to utilize. The new teacher's section included postings of daily lessons and/or homework assignments. Having homework posted on individual teacher pages allowed students the opportunity to keep abreast of their schoolwork in the event of absence from school for any period of time. E-mail links on those pages allowed both students and parents the opportunity to communicate with teachers, when questions arose over homework assignments or other issues.

The educational links section gave students a starting point for any research that they might conduct. The school newspaper was published in portable document format (PDF) which allowed parents to download and view the newsletter on their personal computer. The animal-cams allowed visitors a fresh and interesting look into some of our science classrooms.

The background graphic was reduced in size by the use of a new technique. Gutzman (2000) recommended that web pages load in no more than 8 seconds. With smaller graphics, the page loaded faster than previous versions, allowing visitors access to content quickly.

Goals and Objectives

To meet the goal of an enhanced web page required collaboration among various departments within the school and cooperation among teachers. As an example, communication between webmaster and coaches improved so that sports schedules and scores could get published on the web page on a timely basis. Teachers either learned how to use a program that would allow them to create their own teacher web page, or worked with the webmaster so their homework pages could be updated on a regular basis.

One objective of the project was to allow better communication between parents and teachers by the use of the school's web page. By improving the web page, parents were able to find information about individual teachers easily. The information included updated homework assignments, class projects and e-mail addresses for parents to utilize. The school newsletter was also published on the web page in PDF format as a way for

parents to find out about events happening in their child's classroom.

A second objective was to have teachers become more involved in the web page development. If a majority of parents wanted to see homework assignments and class projects on the school's web page, more teachers had to become involved in the design and development aspect of the school's web page. This removed some of the time constraints that have hampered the webmaster in the past regarding deadlines for individual pages. Individual teachers were now responsible for these deadlines.

Another objective was to have the homepage become a place for student research. The educational links section of the homepage was transferred to individual teacher pages allowing students ready and safe access to on-line research.

A fourth objective was to add some interesting new features to the homepage for human interest. Many web sites have webcams set up for people to view places or things from a distance. The National Park Service has a webcam trained on Old Faithful in Yellowstone National Park so visitors can watch it erupt from great distances (National Park Service, 2001). Originally the thought was

to install a webcam to show the inside area of the school for remote visitors, but the lack of a secure place to install that webcam precluded that. However, one webcam, placed inside a California desert tortoise pen, was installed on the web page. This "tortoise cam" allowed visitors to watch the daily movements of three tortoises in a classroom at the school.

Definition of Terms

Local Area Network (LAN)

A LAN is defined as a "computer network that spans a relatively small area"(Rush, 2001, para. 1).

Wide Area Network (WAN)

A WAN is a "system of LANs connected together via telephone lines"(Rush, 2001, para. 1).

T-1 line

A T-1 line is identified as a "dedicated telephone connection supporting data rates of 1.544Mbits per second"(Rush, 2001, para. 1).

Fiber Optics

Fiber optics is a technology that "uses glass threads to transmit data" (Rush, 2001, para. 1).

Page View

A page view is defined as the accessing or viewing of a particular web page (Rush, 2001).

CHAPTER TWO

REVIEW OF THE LITERATURE

A review of the literature indicated three different areas of consideration with regard to this project. The first area deals with the purpose of creating web pages and their usefulness within the educational community. The second area focuses on teacher training with computers and software. The third area deals with communication between parents, students, and teachers. This is especially important since parents and students are the targeted audience for most school web pages.

Why Build a Web Page?

The use of computers has changed over time from simple word processing to powerful mindtools. Jonassen (1996) described mindtools as "computer applications that require students to think in meaningful ways in order to use the application to represent what they know" (p. 3). The use of hypertext and hypermedia as a way for students to construct their own knowledge is an example of a mindtool according to Jonassen. Jonassen (1996) described hypermedia as the "marriage of multimedia and hypertext" (p. 191).

Hypertext and hypermedia, along with computer-mediated communication like electronic mail (e-mail), allows for interactions between students and a greater degree of collaboration, creating the communication needed to foster student debate and learning.

When an organization is first considering the creation of a web page, studies are usually done to see what would be the most effective avenue to take with regard to the web page. As Terry, Greenblatt, Hashert and Rossignol (1999) pointed out, that was not necessarily the case with many corporate sites in the early 90's. Many early corporate sites were shut down within a year because the companies had not determined in advance what they were trying to accomplish with their web sites. Questions that should have been answered before the process started included: What will make the site useful? Who is the primary and secondary audience? And who is going to create and/or maintain the site? Obviously, the answers to these questions detail how a web page will develop over time. The authors also recommended that a page with staff lists and e-mail addresses would be highly useful for anyone visiting the page.

In their article about distance learning, Zirkle and Guan (2000) also posed very similar questions. If an instructor is going to build a class or school web page, important questions need to be answered so the homepage does not go the route of many corporate ventures from the early 90's. They noted that the most important aspects of teacher/school web pages are to be personal and to have a student friendly homepage. Students will come back for content if the page is interesting. Posting just the course outline or syllabus might not bring many return visitors. But if the content is dynamic and engaging, a teacher has the students hooked from the very beginning. This might even encourage students to begin publishing on their own and perhaps participate in the development of the class or school homepage.

Such was the case with a group of Pacific Islander students when they created a Web site about Pacific children's literature. Dalton (2000) worked with preservice and inservice teachers from the University of Guam to show the collaboration that takes place between teacher and student in the creation of a school/class web page. The web page was designed to highlight the culture and stories of many Pacific islands of Micronesia. The

project allowed for a small group of people to get their ideas across to the entire world, which can be a powerful learning tool for teacher, student and viewer.

In this project the design of the web page was left solely in the hands of the young students. This opened the possibility of "technophobic" teachers creating a teacher homepage by allowing the students to carry the ball for them. Supervision of student work was still the responsibility of the teacher, but the workload for the teacher was greatly reduced, therefore the teacher might be motivated to assign more homepage projects in the future. The project also showed that the school/class web page was not just a technological marvel unto itself, but incorporated core curriculum throughout the pages.

The use of technology does differ depending upon the degree of technological knowledge a teacher already has attained. School district technology coordinators in southwestern Ohio were asked to identify exemplary teachers in a study conducted by Berg, Benz, Lasley, and Raisch (1998). Thirty-nine technology uses in the classroom were identified by the coordinators and then rated by the exemplary teachers and coordinators in order of importance. The most frequent usage of technology by teachers was to

create a learning environment different than a traditional classroom setting (Berg, Benz, Lasley, & Raisch, 1998). Also cited as important was an increase in the communication between home and school.

Interestingly, the use of Internet applications was rated much lower in this study. Teachers rated Internet applications highly, but almost 50 percent of the teachers cited lack of Internet access as a barrier to its use. The authors theorized that the finding might have been different if the study had been conducted a year or so later when Internet access was not as problematic.

They also noted that exemplary teachers of technology utilize the technology in a far different way than an average or novice user. Previous studies they cited (Becker, 1993; OTA, 1995) indicated the overwhelming majority of elementary teachers used technology for "drill and kill" practice whereas exemplary teachers allowed their students to use technology for productivity.

Barriers to developing web pages, such as lack of software, lack of experience, or lack of time seem to be diminishing as well. Terry (1999) noted that even in core curricular areas such as biology, these barriers seem to be breaking down. Just a few years ago, biology instructors

were reluctant to embrace Internet technology. Biology web resources were also disorganized or lacking as well. New software such as Adobe PageMill (Adobe Systems Inc., 1996) or Netscape Composer (Netscape Communications, 2001), with their "What You See Is What You Get" (WYSIWYG) format, has hastened the ability of teachers to create web-based resources of their own. The author also noted the addition of new content resources on the web in biology making research and web page development more of a reality for teachers who would not have gone near the technology even a short time ago.

Although web page creation by educators has increased, the content, communication and learning levels may be at more elementary levels. Mioduser, Nachmias, Lahav, and Oren (2000) set up a taxonomy to evaluate Web Based Learning Environments (WBLE) and had evaluators look at more than 400 random educational web pages. The majority of web pages were aimed at upper elementary children. Only 16% of educational web pages were targeted for sixth grade and above. This suggests that more web page design and development is needed at the junior high/middle school level and above.

They also noted that the "current pedagogical approaches support learning processes that require the students' active involvement in the construction of knowledge" (p. 71) and yet only 28% of the web sites evaluated supported inquiry-based lessons. Most of the web pages were browser only pages. That is, browsing the page and clicking on links was the major and possibly only level of activity available. Use of Java (Sun Microsystems, Inc., 2001) and Flash (Macromedia, Inc., 2001) technology was basically non-existent in most educational web sites. The authors also noted that even though it appeared that educational web sites did not have much to offer, there was much learning potential within them. However, it took an abundance of time for instructors to utilize web based instruction with their students before the potential was fully realized.

The use of software programs for building web pages or other hypermedia projects also raised the question as to whether student achievement and learning actually increased with the use of these types of programs. A meta-analysis by Liao (1999) suggested this to be somewhat true. In his investigation of 35 other studies, Liao found 69 percent of the studies showed favorable findings for hypermedia

instruction, 29 percent of studies showed favorable findings for traditional instruction, and 2 percent of studies (one study) showed no difference between the two types of instruction. Even though it appeared that hypermedia had favorable findings in a large majority of case studies, the results, when weighted, found a much closer grouping with hypermedia being only an 18th percentile higher than traditional instruction. Even so, the findings were that hypermedia was moderately more successful for student learning than was traditional instruction.

More and more, students are conducting research on the Internet. Grimes and Boening (2001) looked at factors influencing students when they conducted research on the Internet. They found that although students were savvy about using the Internet to find sources for research papers, the sources were decidedly less than scholarly in the opinions of their instructors.

The knowledge gap between instructor and student with regard to Internet use was also noted. Teachers admitted not knowing much about the web and assumed the sources would be worthwhile. This suggests a need for a library resources page on any school web page. Librarians,

knowledgeable in good Internet resources, could have a page attached to the school web page with the resources categorized by subject matter. Teachers would probably be more comfortable having their students conduct Internet research knowing there were pages already out there with good information on them.

The school web page can be viewed as an education portal. As Meyer (2000) stated, many schools have opted for a ready-made educational portal as an alternative for teachers who do not have the necessary expertise to create a full-blown web presence. These portals were viewed as "the school newsletter, cafeteria menu, professional conference, assignment notebook, parent-teacher meeting, and select list of bookmarks all rolled into one" (p. 20). Many educational portals even offered a grade book for teachers to utilize. The portal lured teachers, parents, and students in with easy to use materials, but at a cost. Most of these sites were subscription based or had running advertisements. But with a small investment in software, staff development, and time, a school can create their own web presence and not have corporate advertisement banners on every web page that they or their students and parents view. With the necessary tools, teachers can accomplish

the same thing that an educational portal can provide and at a fraction of the cost.

As with anything, there are good points and bad points about letting children surf the Internet. Grabe and Grabe (1998) noted that everything that is on-line is not necessarily good. Web sites that promote hate, drug use, or pornography need to be avoided. A resource page connected to a school web page, containing pre-approved content and/or student friendly Internet sites, has the side benefit of easing an educator's mind as to the appropriateness of the site a child might encounter while conducting research.

Teacher Training

Teacher training seems to be the single most important element in whether teachers will develop new technology embedded curriculum into their already busy schedule. Jaber and Moore (1999) recreated several past studies to discover if the findings of those studies still hold true. What they discovered was that teacher use of computers was up from past studies. Teachers were much more likely to utilize computer technology when the technology was readily available which was in contrast to earlier studies. They also found that most teachers who used computer technology

in the classroom had been self taught or taught by peers, but the vast majority of teachers felt that continuous on-going training would be the preferred method of training.

Teachers also valued more planning time so they could adequately prepare computer-based lessons. The areas where the study was performed was low in Internet access and the authors theorized that with higher Internet access, there would probably be a relationship between Internet access and use of Internet rich technologies such as, but not exclusively, web page development.

Along with teacher training, a systemic change across the entire school is apparently needed as well to achieve technology embedded curriculum. Liu, Macmillan, and Timmons (1998) noted that this type of change needed to be all-inclusive from administration down to instruction, from policy decisions to philosophy. They cited Jonassen's (1996) mindtools as an example of how teachers will need to rethink their approach to teaching.

If integrating technology into the classroom and utilizing mindtools was the ultimate goal, teachers needed to rely less on direct instruction and instead pursue a constructivist approach to teaching. A constructivist

approach allowed the student/learner to utilize technology to construct his or her own knowledge.

Playing a key role in this are the changes at all levels within the school system. Liu, Macmillan, and Timmons noted that teacher training is essential in making sure that computers improve student learning.

New instructional techniques have usually caused anxiety for teachers. Tired clichés came out of the woodwork with regard to teaching old dogs new tricks and teachers being too set in their ways to learn anything new. Reed and Ayersman (1995) set out to see whether these anxieties are justified with their study of hypermedia and stages of concerns.

The researchers had three basic questions they wanted answered. First was whether student attitudes would change as a result of the instruction received in a Hypermedia in Education class. They also wanted to know if previous knowledge had a correlation with growth and third they wanted to see if there was a correlation between hypermedia authoring and attitudes.

The results showed a significant decrease in the amount of concern students had over the use of hypermedia in the classroom. This was apparent in all three growth

groups. Overall data seemed to reinforce what other researchers had found previously about this subject. The more knowledge teachers received, the lower their concerns were with how they could or would implement hypermedia in their classroom. The anxiety level had lowered with use over time so to speak. Change was difficult for almost everybody, but if the change came gradually, new techniques for the classroom were more likely to be implemented.

Identifying computer competencies that were important to teachers became the basis of a study by Scheffler and Logan (1999). They created a list establishing 67 different competencies, which were rated moderately important to very important by teachers and technology coordinators. The list was broken into two sections consisting of general competencies and teacher competencies unique to education. The study "updated knowledge from previous studies by incorporating specific competencies pertinent to networks, the Internet, and e-mail" (p. 307). The Internet and e-mail were ranked important by the educators but were ranked much lower on overall competency by the same educators. In other words, the teachers saw these things as important, but did not necessarily know how to utilize them. It was noted that all teachers, not just

novices or semi-novices should continue technology training. They felt novice users should get some kind of training to help them begin to infuse technology into their curriculum while more advanced technology users would benefit from additional training due to new technology coming on the scene. They also noted that the competencies should be reviewed from time to time to update these as well.

Chiero (1997), in her study of teacher computer users, noted that the use of inservices was not an effective predictor of computer usage within the classroom. She found that the more training a teacher did receive, the more likely they were to be comfortable users of the technology. The access to a technology coordinator type person was a significant factor in the computer usage in a particular school. Gender was another issue Chiero chose to study. Her study was consistent with other studies that showed that males, which make up approximately 27% of the teaching population, are in the majority when it comes to superior computer users. This indicated that there are many teachers out there not using their computers much at all.

The next big question was what type of teacher training was appropriate to get teachers enthused about using computers and web based programs in the classroom. Mowrer-Popiel, Pollard, and Pollard (1994) found that many preservice teachers did not have much computer experience upon entering the classroom, which would tend to support the argument that districts should invest heavily in teacher technology inservices. The preferred method of learning new technologies in their study was in the following order: a tutor, a class, experimenting on your own, and an instruction manual. In other words, one on one instruction was the preferred method for preservice teachers. This indicated that large district-wide inservices might not be doing the job they were intended to fulfill and smaller one-on-one sessions with a technology mentor might be the way to improve computer literacy among teachers.

Gilmore (1995) also found that having mentor teachers lead regular computer inservices was far more effective with regard to computer training, than to have an expert from the outside come in for a one day, all-inclusive inservice. Teachers viewed the mentors as more empathetic to their wants and needs since the mentors were also

teachers and had experienced first hand, many of the trials and tribulations of learning something brand new.

The inservices were geared for all levels and participants were able to work at their own pace, thus giving them a level of confidence not achieved before in other types of inservices. This was extremely important as many teachers realized that a person did not have to be an expert to infuse computer technology into the curriculum.

In another teacher training study, the Virtual Geography Department (VGD) at the University of Texas at Austin conducted a series of workshops over three summers to allow college instructors to develop on-line instructional material in the field of geography. Solem (2000) noted, "the VGD workshops combined discussions into effective demonstrations of how the Web can be used to support issues-based, inquiry teaching in geography" (p. 361). Collaborative efforts among the workshop participants allowed for a free range of ideas to be considered and allowed the talents of individuals to shine forth. Most participants enjoyed the camaraderie of the other instructors who were all interested in developing on-line curriculum. The VGD workshops stressed that it was not

just enough to put lecture notes on-line, but to develop good instructional materials that students could use.

In other areas outside of the teaching arena, studies found the more training people received in computers, the more comfortable they felt about the machines, and the more they would tend to use them. Walters and Necessary (1996) studied business school students and repeated an earlier study by Francis (1993). They found an even stronger correlation between the number of computer classes a student had taken and the positive attitudes those students had about computer usage in general.

Contrasting Mowrer-Popiel, Pollard, and Pollard (1994), Marcinkiewicz (1994 and 1995) found that preservice teachers had more experience with computers than did their teaching counterparts. This indicated that even though schools were investing in computer technology, the training was not also being invested in, or was not being utilized to its fullest. Many teachers found they did not have the time for more training as opposed to preservice teachers who did not have the same time conflicts since they were required to take certain training classes before they were certified. Marcinkiewicz suggested schools

restructure their training methods to take advantage of the technologies that are being thrust upon them.

Dupagne and Krendl (1992) came to similar conclusions in their meta-analysis. They found teachers wanted to embrace technology but were often held back by lack of support from administration. They found when administrators invested heavily and were supportive of technology in the classroom; teachers had a more positive outlook on said technologies. They noted that buying hardware alone was not enough. Support from the administration must not come just with an investment in hardware but also in the much needed training that was required to integrate the technologies into the curricular areas.

Technology training inservices for teachers sometimes had unforeseen drawbacks. Mitra (1998) noted that low users of computers tended to have negative attitudes toward computers, which is not a surprise. People, who were forced to use a computer for a particular task, did so, but that did not change their attitude toward the computer. Attitudes changed when people were allowed to explore some other aspects of a computer not related to the task at hand. Thus, an inservice allowing teachers additional time

to surf the Internet, brought about a more positive attitude toward computers than an inservice that just focussed on learning a particular software application. The former helped teacher attitudes in learning the latter task.

Parent/Teacher/Student Communication

The Goals 2000 National Policy agenda, as set forth by the 103rd Congress and signed into law by President Clinton in March, 1994, set as a goal to "increase parental involvement and participation in promoting the social, emotional, and academic growth of children" (Department of Education, 1994, Parental Particpation, para. 1). High standards for all children were the ultimate goal of the agenda, and much of the monetary funds were earmarked to improve bonds between home and school. Thus, effective communication between these two entities was viewed as a way to meet the agenda's goals.

Parents with strong external support networks, such as church or school, helped contribute to the overall efficacy of parents according to Swick and Broadway (1997). Increased communication avenues helped parents and teachers look out for the well being of the student and also strengthened bonds between each other.

With better communication between home and school, parents helped their children more efficiently and effectively with problems they might be having. Cameron and Lee (1997) conducted a study dealing with voice-mail communications and its ability to reach parents and teachers beyond the normal realm that would apply to a telephone. When their study was conducted, voice mail was in its infancy and was looked upon as a new form of communication that helped teachers reach parents and vice versa. Parents became more involved with their child's education and student achievement also rose when coupled with the use of these newer telecommunication devices.

Although not stated in the article, it would be logical to assume that similar results would apply to e-mail technology. Since voice mail still relies on phone messages, e-mail might be a better substitute as parents and teachers could answer questions directly and not have to play the game of "telephone tag" that so often happens with answering machines and voice mail.

Communicating the vision and plan of a school's web page is very important. It provides an avenue of content for the local community, most notably parents, students and teachers. The school web page is viewed as an

advertisement to areas outside the community. School homepages, which have information about the school, pertinent to people moving to the geographic area, have a distinct advantage over other schools which did not have school web pages.

Williams (1997) noted that parents received information about potential schools in and around the Memphis area, before they moved to the area. The school Williams was associated with, polled secretaries to discover which information people surfing the school's homepages wanted. When queried by out of town residents, school personnel directed them to the school's web page. People had immediate access to a multitude of information about the school while a hardcopy packet was being sent to them in the mail. The technology coordinator in charge of maintaining the homepage also polled parents after the web page was up and running to get feedback for improvements. One of the first improvements on the school web page was teacher e-mail links.

Creating a web page with e-mail links had advantages when it came to communication between parents and teachers and between students and teachers. Having a teacher web page connected to the school's web page allowed teachers

the ability to pass along useful information to parents and students with Internet access in a timely fashion. In their article, Crippen and Brooks (1999) found communication between parents and teachers was much less one-sided when e-mail and teacher web pages were used to create another possible communication angle. They created their own class web page with up-to-date information about upcoming projects, tests and homework. Students who utilized the site felt they were better prepared for the class and parents felt the information was "helpful, especially when children were behind or had been absent and needed to make up work" (p. 52). With e-mail links, students were also able to write and ask the teacher pertinent questions about projects or homework they were completing (Gamas & Nordquist, 1997).

Morris (2000) reported similarly about a school in Beaverton, Oregon. A fourth grade teacher published student projects, assignments and homework activities on the school's web page in an effort to provide better communication to his students' parents. Parents were enthusiastic as well. They stated that they had a better grasp on what their child was doing at school on a regular basis. One parent noted superior communication with the

teacher who utilized the web site versus the teachers who her son had the following year at the local middle school and did not utilize web communications. Although anecdotal in nature, this provides more evidence that parents seem to welcome teacher and school web pages as another avenue of communication.

School web pages are not just a passing fad anymore. With over 13,000 school web pages on-line (Collins, 2001) and more being added every day, it is apparent that the "wave of the future" is here. Web pages can be utilized for publishing, research or communication between home and school.

As noted above, teacher training in the area of web publishing is greatly needed as most teachers probably do not yet have the expertise to sit down and create a class web page, let alone a more complex school web page. The more technology training districts can offer their teachers, the more likely the technology will be utilized in the classroom (Chiero, 1997).

Lastly, good communication between home and school has been shown to help improve student achievement (Cameron & Lee, 1997). Web pages offer an additional and effective form of communication between school and home.

CHAPTER THREE

PROJECT DESIGN AND DEVELOPMENT

The present Cucamonga Middle School web page has been in existence for 6 years. It has been through several different design changes, but prior to this project, there has been no research to back up what is on the pages. Much of the information that was on the web page had been there in some form or another since its inception. In other words, the content had not been kept fresh. The obvious thing to do was to revamp the school web page with viewers in mind so that content was valuable to them.

Analysis of the Data

To determine what areas of the Cucamonga Middle School web page were in need of improvement, a survey was given to parents of all sixth and seventh grade students at the school. The survey was a modified version of Gardner's (1999) parent survey (See Appendix A).

Six hundred forty-two surveys were sent home to parents on March 6, 2001 in an effort to determine the needs of the parents with regard to the web page. The sample group was chosen mainly because it was felt that parents from these two groups would benefit the most from

changes to the web page since their child(ren) would still be in school when the changes to the web page took effect. Parents were asked to return the survey by March 16, 2001. The return rate for the surveys was almost 40%.

The survey asked parents whether they were owners of home computers and whether they had Internet access. The survey asked about modem connection speed. Parents were also asked to go to the school's homepage and time how long it took to load based upon that speed. Parents were queried how they received their information about school events and whether they felt that having the same information on the school's web page would be more helpful than other traditional methods. They were also asked if the state standards and the district grade level expectancies should appear on the web page. Finally, they were asked to rate ten topics that could appear on the school's web page in order of importance.

Of the parents who did return surveys, 205, or 80% stated that they owned a home computer. According to the Department of Commerce, 73.2% of households with a median family income up to 75 thousand dollars had home computers (DOC, p. 10). The latest census indicated that the median family income for all families living in the Central School

District had incomes between 30 and 60 thousand dollars (Tiger Mapping Service, 1990), which would indicate that parents within the Cucamonga Middle School boundaries were above average with regard to home computer ownership. Figure 1 shows the percentage of parents with home computers.

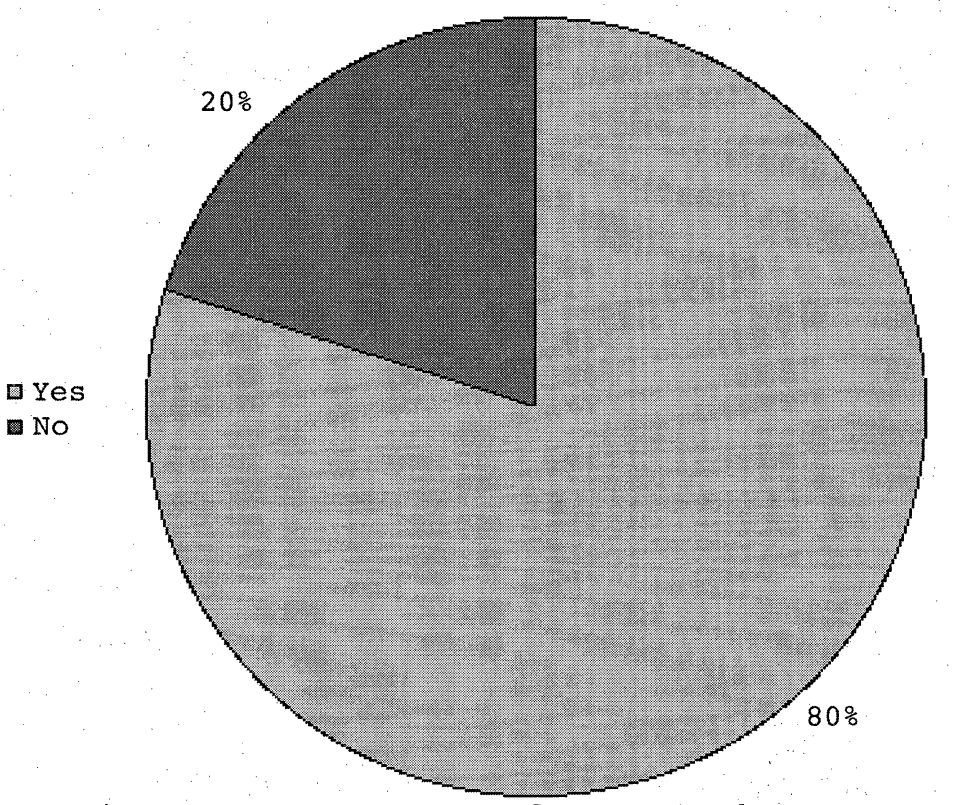


Figure 1. Percentage of Parents Who Owned Home Computers

The survey also showed similar findings with regard to home Internet access. Of the parents who had home computers, 83% had Internet access on that computer. This

compared with national averages ranging from approximately 25 to 62% for the about the same income levels (DOC, p. 12). If all other non-returned surveys had been returned with "no" answers to the Internet access question, the percentage of parents with Internet access falls to 26%, still within the national averages although on the low side. It seemed highly unlikely that all non-returned surveys would come back with negative responses, so it was possible to assume that the parents in this survey had slightly higher than average Internet access compared to national averages for similar income brackets.

Parents were also asked about how they receive most of the school-to-parent information. They were allowed to pick more than one response, so the numbers did not correspond to the actual number of returned surveys. The source where parents received information about upcoming events most frequently was the school newsletter with 142 responses. The three that were next highest were the school calendar (98 responses), flyers (94 responses), and teacher letters (80 responses). 47 parents relied upon their child to convey information about upcoming events to them and only 10 parents received information about

upcoming events from the school's home page. Figure 2 shows how parents received information about the school.

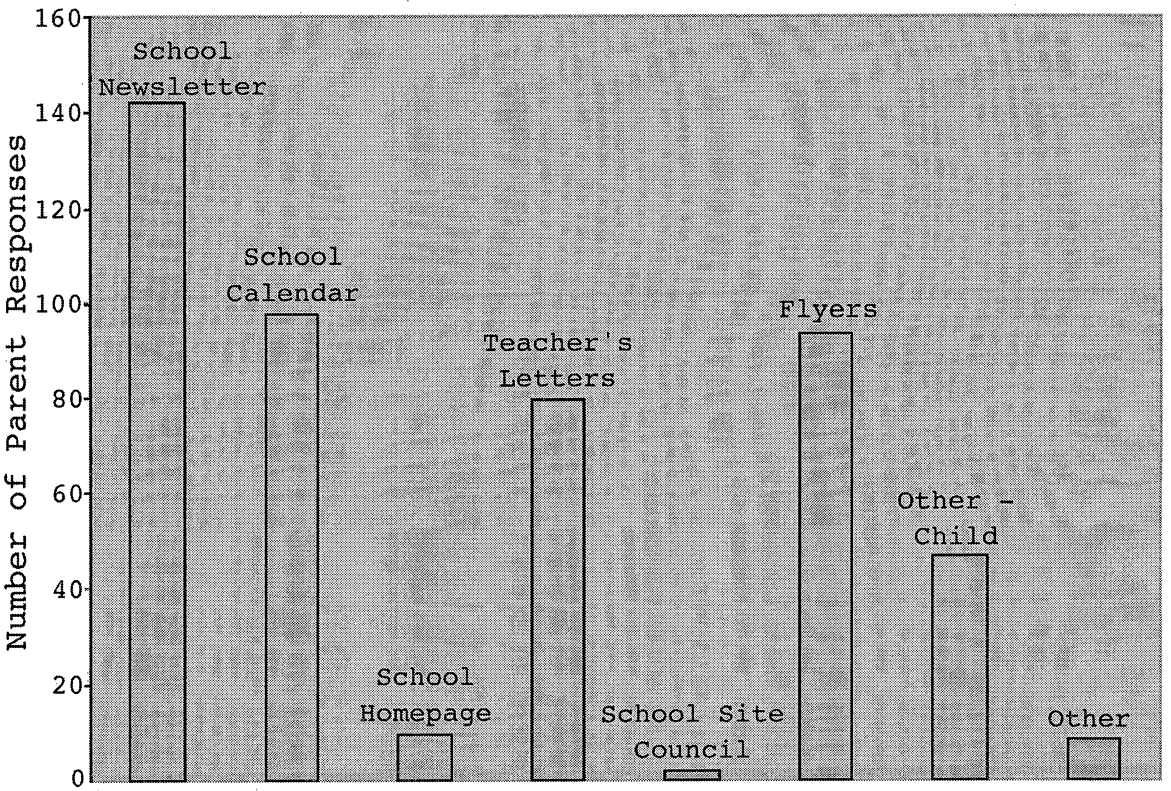


Figure 2. Ways Parents Received News About School

Although there were few parents at this time utilizing the school's homepage for information of this type, it appeared as if they would have liked the information available. When queried whether they felt a web site would be more helpful in finding out about upcoming events than other traditional sources, two-thirds of the parents agreed or strongly agreed with this question. Almost three-quarters (74%) of the parents stated that having access to

the state standards and the district grade level expectancies was important. It was interesting to note that parents received a hard copy of the district grade level expectancies at the beginning of each school year. If the paper copy of the expectancies were to be misplaced at home, parents would still have ready access to them if the standards were placed on the school's web page.

The last question was the most difficult to tabulate, because each response had up to 11 possible answers or ratings. The results were tabulated in two forms; raw data and a weighted formula devised by the author. Certain topics clearly stood out as most important, however several others were harder to discern using just raw data. A weighted formula was utilized to make it easy to distinguish between topics that appeared to be relatively close together in importance. 10 topics were listed for parents to rank in order of importance. The topics were, school calendar, upcoming events, grade level expectancies, school and/or classroom projects, school and/or classroom webcams, lunch menu, school newsletter, listings of homework, virtual tour of the school and sports schedules. They were also given a place to write other ideas that they

felt were important but had not been mentioned in the survey.

The data indicated certain preferences by the parents. The most important thing that parents wanted to see on the school's web page was a listing of homework by teacher or department. Fifty-three percent of the parents named homework as their number one priority for the web page and 75% of the parents made it either their first, second, or third choice. Clearly, parents would most likely utilize the web site if this information was provided on a regular basis. Figure 3 shows the percentage of parents who felt that homework listings were a very important aspect of the school's web page.

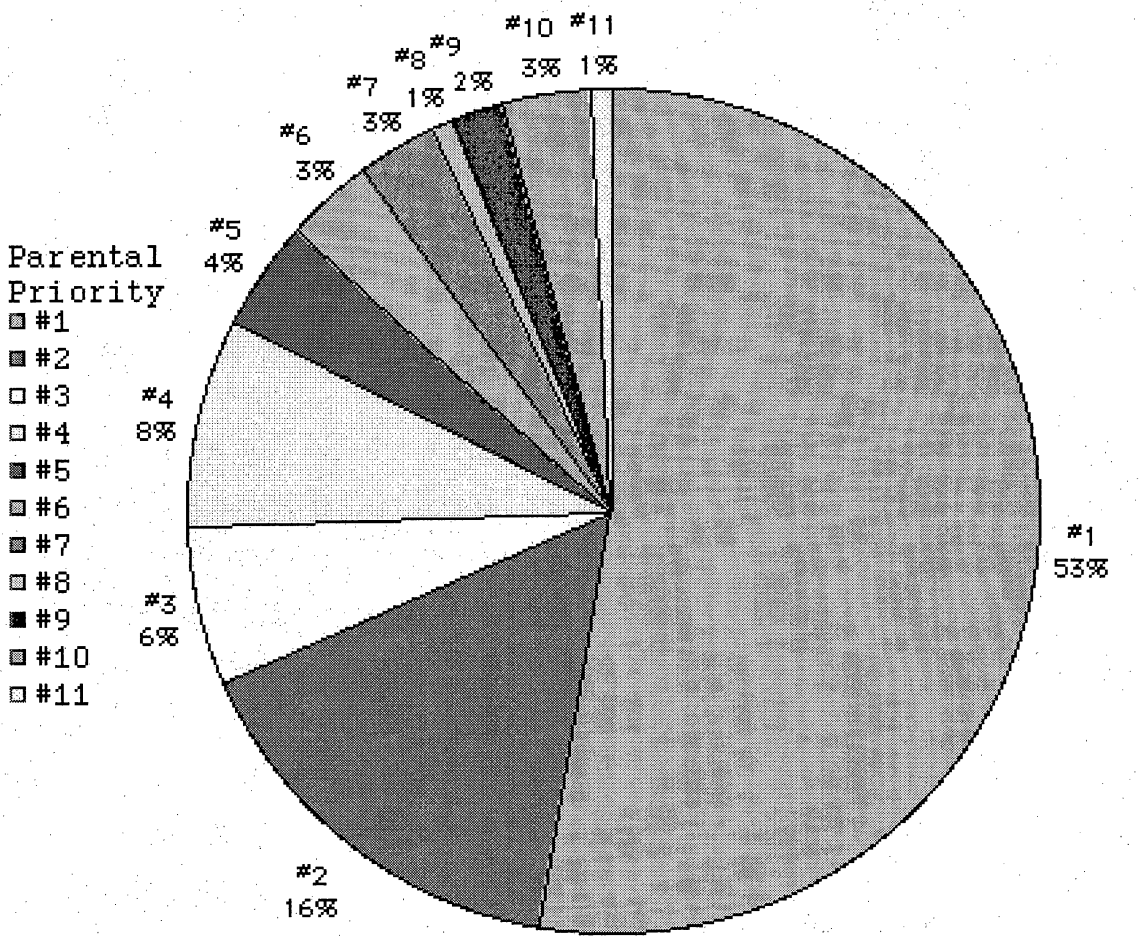


Figure 3. Parental Ranking of the Importance of Homework Being Listed on the School Web Page

Parents also wanted to see a school calendar on the web page. Fifty-three percent of the parents made this their first, second, or third choice. Fifty-eight percent of the parents ranked the grade level expectancies as first, second, or third. Fifty-two percent ranked classroom and/or school projects as first, second, or third.

There were also items that parents did not feel were very important to include on the web page, or at least not as important as other items. Webcams, virtual tours of the school, lunch menus, and sporting schedules fell into this category. The last one was surprising since the school had football and basketball teams that competed regularly and one would expect that parents would like information about upcoming games. Perhaps parents realized that this information was already included on the school calendar and therefore felt the sporting schedules to be unnecessary. It should be noted that every single item was rated by at least one parent as the most important thing that a school web page should have.

The topics that fell in the middle importance level were the hardest to determine. This was the reason for the development of the weighted formula. The weighted formula took each parent response and assigned a point value to it. For each ranking of number one, a topic received eleven points. For each ranking of number two, the topic received 10 points, continuing on down to a ranking of 11, which received a one point value. Points were added up and then divided by 11. This constituted the weighted formula. Conceivably, a topic could have received a weighted value

of 11 if every response were to rank it number one, but that did not happen. The purpose of the weighted value was to give some meaning to the topics that were clearly not rated most important, but also clearly not rated least important.

As expected, homework listings, because of the high number of "Number one" rankings it received, got the highest weighted value of 8.37. Ranked second was the school calendar with a value of 7.29 followed closely by the grade level expectancies at 7.15 weighted value. Figure 4 shows the entire list of weighted values for all 10 topics.

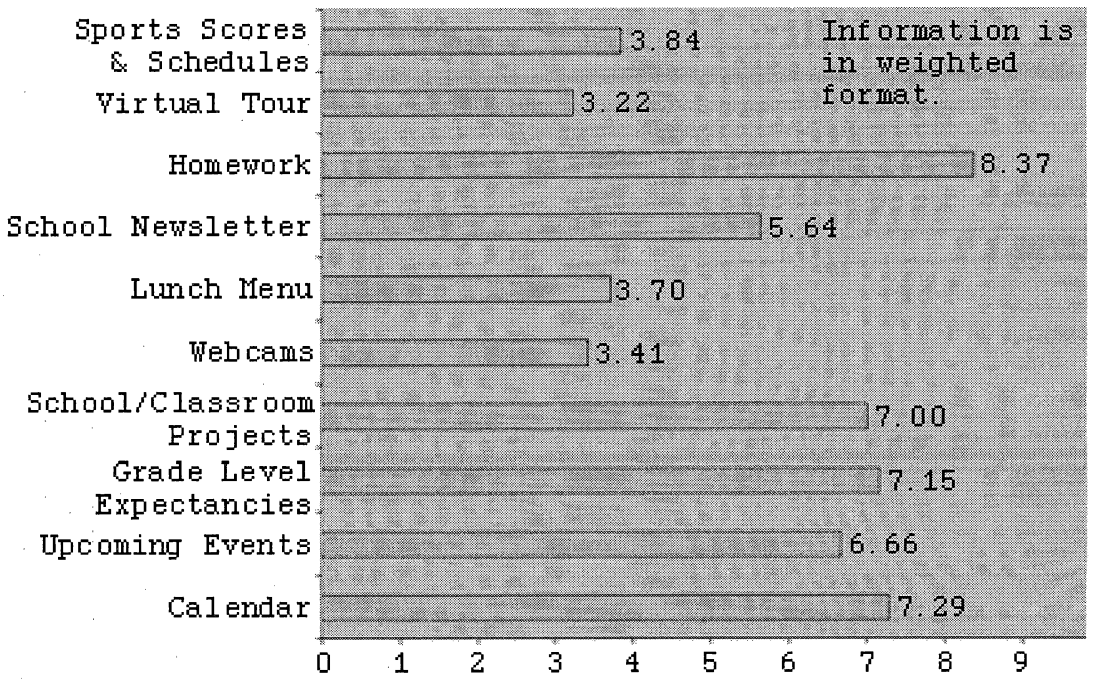


Figure 4. Items Parents Wanted to See on the School Web Page

The most disappointing results from the survey were the questions dealing with modem speed and loading time for the homepage. Responses were very inconsistent and spotty. Apparently, most people did not know the speed of their modem or misunderstood the question. Answers ranged from 56.6K to 600MHz to "slow." Loading time for the page ranged anywhere from three seconds to two minutes and there was no consistency between modem speed and loading time. The results were so inconsistent as to make this data unreliable.

The last bit of information that was discovered by the survey was the "Other" category of question number seven dealing with priorities for the web page. This was the section where parents could suggest other things that had not been thought about by the author. There were few responses in this category, but the one aspect that parents did suggest was individual teacher homepages or profiles. Forty-three percent of the people responding to this section made this suggestion (See Appendix B).

There were several limitations to the survey, which may have affected the overall results. However, since the resulting sample size was 256 surveys or 39.6% of the original number surveyed, the results were considered

reliable. The belief of the author was the mortality rate was either due to time constraints by the parents, or lack of computer or Internet access thus suggesting that the results would not have differed had the non-respondents indeed responded. Parents might not have responded if they did not have a computer or Internet access thinking the survey did not apply to them. However, when looking over surveys of parents who answered "No" regarding computer ownership or Internet access, it appeared that these results were consistent with the parents who did have computers and/or Internet access, thus possibly negating this bias. There might be limits to the generalizability to all schools in the district because only parents of sixth and seventh graders were surveyed. What was true for middle school parents might not be true for elementary school parents.

Design and Development of the Project

Looking at the data, it was encouraging to see that the previous version of the school's homepage already had some of the features that the parents wanted to see on the web site. The web pages had a calendar section that was updated on a monthly basis. At the beginning of each school year an entire calendar was placed on the homepage

with dates and times indicated for various events and happenings on campus. The school newsletter, which was published four times a year, was also published simultaneously on the web pages.

The first major revision to the homepage was improving the loading time of the page. After looking at the graphics on the page, the graphic that was the largest and probably took the longest time to load was the background image. The way that it was constructed also made it look very strange on monitors with a resolution over 800 x 600 pixels. After looking at different techniques, a new way of creating the same design without using the large graphic was discovered. The technique involved using a table with a colored background. This served the same purpose as the original background, but quickened the loading time of the pages.

The next step was a revamping of pages to eliminate some and add others that were needed. There were several pages on the homepage at the time that were either out of date or redundant. The news page was sorely out of date due to time constraints among the teachers and some lack of communication between webmaster and teachers on staff. This page was updated to show current news and information

pertinent to the school. The school newsletter was changed to a PDF document using Adobe Acrobat (Adobe Systems, Inc., 1999) that parents were able to download. The format allowed the newsletter to stay in its current form as opposed to an all text document.

The sports pages were eliminated and information from these pages was included in the calendar section of the web page. Parents rated the sports pages much lower than other items and the information on these pages was probably construed as being redundant.

The major piece that needed to be added to the homepage was a section for homework listings. With 75% of the parents stating a major preference for homework listings, it was prudent to get teachers to attempt this endeavor.

On the previous homepage, there was a teacher page that informed viewers of what each teacher currently taught. It also allowed viewers to send e-mail messages to each teacher via e-mail links on the teachers' names. In the revision, three teachers volunteered to pilot individual teacher homepages. These teacher's names were edited so instead of clicking on the teacher's name to send an e-mail, the link sent viewers to the individual teacher

homepages. There, students found information about the teacher, received up to date homework information, and were able to send e-mails to that particular teacher for clarification about the homework or to ask questions regarding class work. Parents, obviously, were also able to get the same information as well as send e-mails to teachers to touch base with the teacher regarding their child's progress in that class. The individual teachers updated their homepages on a weekly basis. Classroom projects, if any, were also included on the teacher pages as well.

Grade level expectancies were placed on the news section page. A hard copy was obtained, scanned and then turned into a PDF document. Hot links were created from individual teacher pages leading to the grade level expectancies.

Once the major changes and revisions of the homepage were accomplished, other features, which were rated a lower priority by parents, were attempted. One of the science teachers expressed an interest in having a webcam set up in one of his animals' cages. The first live webcam from Cucamonga Middle School featured three California Desert Tortoises, which are an endangered species. Information

about the tortoises was also included on this page as an educational resource about the species. The webcam broadcast new pictures from inside the tortoises' enclosure every 40 seconds to the Internet.

Formative Evaluation

The Universal Resource Locator (URL) for the homepage is http://www.csd.k12.ca.us/cucamonga. Sample pages of the enhanced homepage can be viewed in Appendix C.

In mid May 2001, e-mails were sent to ten parents and ten teachers to look at the new design of the pages and to give feedback. Respondents were asked to reply by the first week in June (See APPENDIX D). Five teachers and three parents replied to the e-mail. It was believed that the number of responses were low due to the e-mail questionnaire coming near the end of the year and during SAT-9 testing. Parents had been given numerous questionnaires over the preceding months and may have viewed this one with less interest, being possibly "surveyed out." Teachers were busy with end of the year activities and testing assessments and could possibly have been too busy to reply.

There were mixed reviews among teachers responding to the survey. Teachers commented on the new look and said

that the new font (Comic Sans) was much easier to read than the old font. Two teachers expressed reservations about the new teacher's homepages. If was felt that this would be an added layer of responsibility (one teacher used the term "burden") upon an already busy schedule for the teachers.

Most parental responses were very positive about the new homepage. The pages loaded quickly and the links were well thought out and made logical sense to parents. Suggestions for improvement included adding more space between the link button titles to avoid confusion between different buttons. It was also suggested that links leading outside of the school's web page should open in a separate browser window. Once out of the school's web page, using the back button became cumbersome. Loading outside links in a separate window would immediately alert parents they were leaving the school's web page and ease navigation as all parents would have to do is close out the browser window they were in and they would be back to the school web page where they started.

The teacher pages were very well received. Parents located each teacher's subject and grade level with ease. It was noted that it was difficult to determine which

teacher links went to an e-mail and which went to an individual teacher page. Having separate links to e-mail and to the teacher page in this case was noted as being more helpful.

Parents loved the links to homework on the pages. One parent mentioned she liked the ability to see what was happening in a class for an entire week at a glance, a notable difference between it and the school's existing homework hotline. All parents said they would utilize the teacher pages if the pages were updated on a regular basis because they would be aware of what their child was accomplishing in each class and would also know the homework for which he/she was responsible. They liked the e-mail links as it would allow them easy contact with any teacher at school. Two parents also commented that they hoped that in the future more teachers would begin utilizing teacher homepages as another source of information for parents.

Strengths

Cucamonga Middle School previously had the reputation of having one of the best web pages in the district. The webmaster consistently maintained a polished product on-line at all times and provided updates on a monthly basis.

The improvements made to the web page will only serve to bolster that reputation and could provide a standard for the other school's within the Central School District to follow.

Another strength of the project was to improve communication between home and school, both parent/teacher communication and teacher/student communication. Homework assignments posted on individual teacher web pages as well as e-mail addresses have allowed for easy communication between teacher and student or teacher and parent.

Limitations

The biggest limitation to the project was that the level of service that the web page currently provides cannot be maintained. At this point in time, the webmaster of the homepage is no longer a paid position, so time allocated to the updating and maintaining of the homepage will not occur thus causing the page to return to its former stagnant status. If the position were to be funded in the future, it would most likely be expected that the homepage would be updated on a regular basis throughout the school year.

Another limitation pertained to the answers provided by the parent survey. Seventy-five percent of the parents

wanted homework listings on the teacher web pages. It was beyond the scope of the webmaster to provide listings of homework on the school web page for all teachers. Unless the staff as a whole can be trained in the future to create their own homepages, it is unlikely that teacher homepages will become the norm on the school web site.

The wording of the survey was also a limitation. The question regarding modem speed seemed particularly bothersome to parents either because they did not know the speed of their modem, or they did not understand the question. The inconsistent results obtained from this question would seem to indicate that this question needed to be piloted by a smaller group of people to ensure the question was understandable.

The timing of the e-mail questionnaire was also a limiting factor. Because the project was completed in May, there was not a great deal of time to conduct a follow-up survey before the end of school. This probably contributed to the small amount of returns for this particular survey. Future surveys of this type should be sent out earlier in the year.

A final limitation was the expertise of the webmaster. Applying new technologies and/or new software to an

existing web page was time consuming. It took time to learn how to create webcams, background graphic tables and PDF documents. As noted above, the time involved learning this new software was limited by other duties of the author, which precluded including some items on the homepage such as a virtual school tour and a second webcam.

Future Projects

By the fall of 2001, the homepage should be expanded to include many more individual teacher web pages. A certain expenditure of funds will be needed for this aspect to be fully successful. Purchasing a site license for a web-authoring program such as Adobe PageMill (Adobe, 1996) would be in order.

PageMill is a great program for people with little or no knowledge of making web pages. No HTML knowledge is necessary, as PageMill is a WYSIWYG program. By utilizing PageMill and Fetch (Matthews, 1996) which allows a person to upload web pages to a server, teachers would be able to create their homepage much like a word processing document, save it to their hard drive and then upload it to the district server with relative ease. The teacher training for this would be relatively easy to accomplish with a

couple of general inservices and several individual follow ups for those teachers with further questions.

The possibility exists for each teacher to supply viewers with individual educational resource links for their particular subject. Should this become a reality, the educational links section of the homepage would also be eliminated to streamline the page further.

Another piece that could be added to the homepage relatively easily would be a monthly lunch menu. The information is on digital form at district office. A copy would have to be procured on a monthly basis and turned into a PDF document for parents to download.

Although not high on the list of parent wants, a virtual tour could be included in future projects once the necessary needs of the parents are met. Using a scanner and a software program known as VR Worx (VR Toolbox, Inc., 2000), pictures of the school could be digitized and "knitted" together and then uploaded to the server. Viewers would be able to download these pictures to their computer and then manipulate a 360° view of a particular area of the school. Hot links within the picture would lead the viewer to other areas of the school with new downloads and new panoramas to explore.

It is possible that a second webcam could be on-line in the near future as well. This particular webcam would also be in a science classroom and would focus on the life habits of a corn snake.

CHAPTER FOUR

RECOMMENDATIONS AND CONCLUSION

Recommendations to Other Professionals

When constructing a web page, it is important to understand the viewers of the homepage. In this case, the most likely viewers (parents) were surveyed to discover what their wants and needs were. Because loading time of the page was an important aspect, it was frustrating to receive unreliable data with regard to the questions dealing with modem speed and loading time. It would be prudent for others that attempt this type of project to reword these particular questions to make them clearer in the minds of the surveyed.

Suggestions by parents were also extremely helpful. One parent noted that outside links leading away from the school's homepage could be best set up as links that would open in another browser window. Many corporate web sites utilize this technique as a way to keep viewers at their web site, yet allow them to explore outside links. This technique eliminates confusion the viewer might face as to whether he is still at the school's homepage or at some other web site. All the viewer has to do is close out the top window and he is back at the school's homepage.

The technique of using invisible tables also becomes very valuable when creating or maintaining a homepage. In the past, the background image of the Cucamonga Middle School homepage had always been a static background image. The image was fairly large due to the added color border on one side of a JPEG image. By utilizing an invisible table, the webmaster was able to remove the color border on the background image, thus reducing the size of the image and improving loading time. The invisible table can have a background color inserted into it, which makes it look like the color is part of the background image. Because the color does not affect the loading time of the page, the page loads more quickly than the older version with the larger background image.

Conclusion

The overall design of the Cucamonga Middle School homepage will remain fairly intact in the foreseeable future. The research from the survey has provided the necessary information to help the webmaster keep up to date with current needs from viewers, especially parents. The site should continue to grow as more and more teachers are trained in the process of building their own web pages.

What will be interesting to see is whether the district continues to view technology as an important part of the educational process for the students within the district. As educational pendulums swing back and forth, new areas become more or less important depending upon various factors. Having a presence on the Internet was important five or six years ago when Cucamonga Middle School first published its homepage, but it may not be as important in the future. But as more and more parents come on-line, it stands to reason that the district will continue to hold technology as a priority. Access to the Internet is not universal, but the number of homes with access is becoming greater each year and it makes sense to utilize all means available to keep the communication lines open between school and home. Hopefully, the information included in this project will be a guiding influence for the other schools within the district.

APPENDIX A

PARENT SURVEY ON CMS HOMEPAGE

March 6, 2001

Hello,

Thank you for taking time out of your busy schedule to take this survey. My name is Paul Myers and I am a teacher at Cucamonga Middle School. This survey is part of my master's project and is designed to investigate parent wants and needs with regards to school webpages. In this survey you will be asked to respond to several questions regarding your Internet use and your wants and needs concerning Cucamonga Middle School's webpages. The survey should take about 10 to 15 minutes to complete.

This study is being conducted under the supervision of Dr. Amy Leh, Professor of Instructional Technology at California State University, San Bernardino. This research has been reviewed, determined exempt and approved by the Institutional Review Board, California State University, San Bernardino.

Please return this survey with your child to their science teacher by March 16, 2001. Once again, thank you in advance for helping us create a better webpage for our school.

Sincerely,

Paul Myers

Survey of Parent Wants and Needs Regarding School Webpages

- Do you have a home computer? _____

- If yes, does your home computer have access to the Internet? _____

- What is your modem/access speed? _____

- Please circle your best response(s) to the following question. How do you currently find out about upcoming events at the school?
  A. School newsletter
  B. School calendar
  C. School homepage
  D. Teacher letters
  E. School site council
  F. Flyers
  G. Other_____

- Please circle your best response to the following question. Do you think a website would be more helpful in finding out about upcoming events than other traditional methods?

  Strongly agree
  Agree
  Neither agree nor disagree
  Disagree
  Strongly disagree

- Would you like access to the state standards and grade level expectancies via our school web site?

- On a scale of 1-11, 1 being the most important and 11 being least, rank in order, what you would like to see on the school web site.

  A. _____School calendar
  B. _____Upcoming events
  C. _____Grade level standards
  D. _____School and classroom projects
  E. _____School and/or classroom animal webcams
  F. _____School lunch menu
  G. _____School Newsletter
  H. _____Listing of homework per teacher or department
  I. _____Virtual Tour of the school
  J. _____Sports Schedules
  K. _____Other_____

- If you have Internet access, please go to Cucamonga Middle School's webpage @ http://www.csd.k12.ca.us/cucamonga and tell me how long it took to load the opening page.
  _____

- Please write any comments you have about the school's webpage in the space below.

IRB Exempt Statement

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

APPROVED
Exempt Review
IRB File #
00018
APPROVED

The California State University

February 12, 2001

Mr. Paul Myers
c/o Professor Amy Leh
Department of Educational Science, Math & Technology
California State University
5500 University Parkway
San Bernardino, California 92407

Dear Mr. Paul Myers:

Your renewal application to use human subjects, titled, "Survey of Parent Wants and Needs Regarding School Webpages" has been reviewed by the Institutional Review Board (IRB). Your informed consent statement should contain a statement that reads, "This research has been reviewed, determined exempt and approved by the Institutional Review Board of California State University, San Bernardino."

Please notify the IRB if any substantive changes are made in your research prospectus and/or any unanticipated risks to subjects arise. If your project lasts longer than one year, you must reapply of approval at the end of each year. You are required to keep copies of the informed consent forms and data for at least three years.

If you have any questions regarding the IRB decision, please contact Michael Gillespie, IRB Secretary. Mr. Gillespie can be reached by phone at (909) 880-5027, by fax at (909) 880-7028, or by email at mgillesp@csusb.edu. Please include your application identification number (above) in all correspondence.

Best of luck with your research.

Sincerely, Joseph Lovett

Joseph Lovett, Chair
Institutional Review Board

JL/mg

cc: Professor Amy Leh

5500 University Parkway, San Bernardino, CA 92407-2397

APPENDIX B

RESULTS OF PARENT SURVEY

Q-1 Yes	No
[illegible]	[illegible]

Q-2 Yes	No
[illegible]	[illegible]

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Q-5				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Yes	No Preference	No
Q-6		
[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	School Site Council	Flyers	Other - Child	Other
[illegible]	[illegible]	[illegible]	[illegible]	2	94	47	9

Calendar Question-7

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	11th	12th
58	24	35	36	25	17	4	7	9	7	1

Upcoming Events

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
16	34	33	39	33	25	16	8	4	2	4

Grade Level Expectancies

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
46	40	35	23	15	11	15	9	9	3	6

Class Projects

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
24	49	36	19	34	14	12	8	6	4	3

Webcams

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
4	4	13	8	17	18	21	32	29	40	21

Newsletter

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
10	20	17	17	37	45	31	20	7	3	3

Lunch Menu

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
8	3	7	14	21	21	25	30	32	30	19

Homework

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
112	33	13	17	9	7	6	2	4	7	2

Virtual Tour

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
7	8	2	8	12	13	22	33	43	51	11

Sports

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
6	10	10	8	17	19	26	35	37	35	6

APPENDIX C

SAMPLE PAGES FROM THE CMS WEB SITE

Cucamonga Middle School

- Home
- Principal's Message
- Meet the Teachers
- CMS Calendar
- News & Info
- School Boundaries
- Reading Initiative

Welcome to
Cucamonga Middle School
7611 Hellman Avenue
Rancho Cucamonga, CA
91730

Office:
(909) 987-1788
Attendance:
(909) 987-4803
Homework Hotline:
(909) 980-1745
FAX:
(909) 483-3201

We hope you enjoy your visit to our school. Please use the menu bar at the left to navigate around our site. Learn about department offerings and find out what each teacher is teaching this year on our Meet the Teachers page. The Sports News gives you latest scores and schedules for all of our school's athletic events. Find out about upcoming events by accessing the CMS Calendar. You can access our current edition of the school newsletter as well as past issues of the newsletter on the News & Info page. To read our newsletter you will need Adobe Acrobat Reader. Download Adobe Acrobat Reader by clicking on the logo.

Upcoming Events

Home
Principal's Message
Meet the Teachers
CMS Calendar
News & Info
School Boundaries
Reading Initiative
Educational

Click on a month to view upcoming events for that particular month.

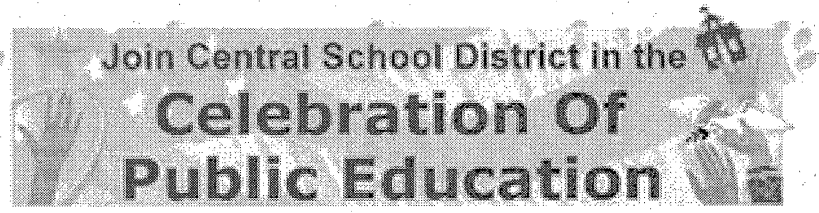
July 2001 - August 2001 - September 2001 - October 2001 - November 2001 - December 200
January 2002 - February 2002 - March 2002 - April 2001 - May 2001 - June 2001

May 2001

		1 PTA/PTO H2A Dinner	2	3	4 Progress Reports go home	5
6	7 Set-9 Testing	8 Set-9 Testing	9 Set-9 Testing	10 Set-9 Testing	11 Set-9 Testing	12
13	14 Set-9 Testing	15 Set-9 Testing	16 Set-9 Testing	17 Set-9 Testing	18 Set-9 Testing	19
20	21 SAT 9 Testing Score Writing Samples	22 SAT 9 Testing Score Writing Samples Golden State Exam	23 SAT 9 Testing Score Writing Samples Golden State Exam	24 SAT 9 Makeups Score Writing Samples	25 SAT 9 Makeups Score Writing Samples	26
27	28 Memorial Day	29 Score Writing	30 Score Writing	31 Score Writing	Back to Top	

News & Information

Home
Principal's Message
Meet the Teachers
CMS Calendar
News & Info
School Boundaries
Reading Initiative



This page is dedicated to celebrating the educational triumphs of the educators, students, and volunteers at Cucamonga Middle School.

For information about upcoming events throughout the year, please see our Calendar page.

Shop on-line through SchoolCash.com and help our school. A percentage of each sale goes directly to Cucamonga Middle School. Use PID# 00107139 when shopping through SchoolCash.com.

The school newsletter is now on-line. You must have Adobe Acrobat Reader installed first. Get Adobe Acrobat Reader by clicking on the Acrobat logo.

Reading Initiative
Educational Resources
Business Partners

The school newsletter is now on-line. You must have Adobe Acrobat Reader installed first. Get Adobe Acrobat Reader by clicking on the Acrobat logo.

Get Acrobat Reader

November 1999 - 229K	January 2000 - 104K		March 2000 - 199K	June 2000 - 274K
October 2000 - 196K	December 2000 Unavailable		March 2000 - 118K	June 2000

Parents - you can download the Central School District's Grade Level Expectancies in PDF format.

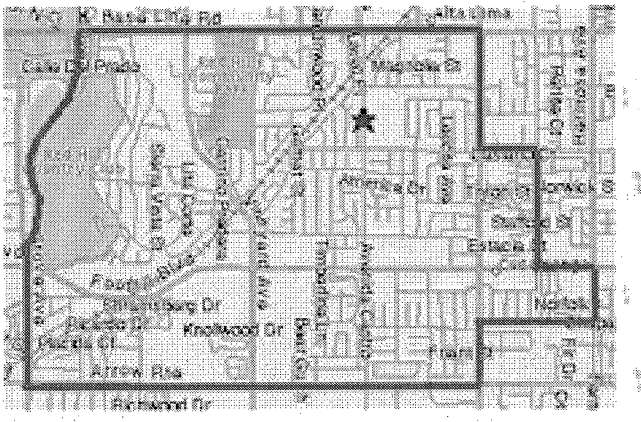
6th Grade GLE - 389K	7th Grade GLE - 457K	8th Grade GLE - 642K

These pages were last updated May 10, 2001

Home - Principal's Message - Meet the Teachers - Calendar - News & Information
School Boundaries - Reading Initiative - Educational Resources - Business Partners

CMS School Boundaries

Home
Principal's Message
Meet the Teachers
CMS Calendar
News & Info
School Boundaries



The Cucamonga Middle School Boundaries are bordered by Baseline Rd. on the north. The boundary runs to the west of Red Hill Country Club along the western boundary of the city of Rancho Cucamonga and then south along

Meet the Teachers

Home
Principal's Message
Meet the Teachers
CMS Calendar
News & Info
School Boundaries
Reading Initiative
Educational

Certificated staff in the district consists of 213 employees. Since some of these educators work in part-time assignments, the actual number of full-time positions is equivalent to 208. Thirty-eight percent have advanced graduate degrees, and 86 percent are tenured (worked more than two years in the district). Most staff members continue their education and the district encourages and supports teachers in their educational pursuits. **Click on a teacher's name to view that teacher's page or send that teacher an email.**

Mick Alfonso 7th, 8th Math	Kathy Arkle Physical Education	Ali Ault 8th Social Studies
Trudi Bass 6th Language Arts, Social Studies, Language Workshop	Janis Bobelin 6th Language Arts, Social Studies, Language Workshop	Shannah Barrington Social Studies Department Chair, 7th Social Studies
Jim Bassett 7th, 8th Math	Newman Bellin Resource Specialist	Cindy Bent Resource Specialist
Mary Brittain Speech - Language Pathologist	Sandy Colangel 7th Math, Science	Sharon Vassell Communicatively Handicapped County Class
Michelle Conte 6th Language Arts, Social Studies, Language Workshop	Dawn Cushing Elective Department Chair, 6th, 7th, 8th Exploratory Wheel	Jan DeMaine 7th Language Arts, Language Workshop

Tony Dolchel 8th Language Arts, Language Workshop	Janelle Ketsin 6th Math, Science, Exploratory Wheel, E.L.D.	Mary Ellen Leonard 6th Math, Science, 7th Math
Janet Lipp Special Educaton Department Chair, Special Day Class	Tracey MacDonald Resource Specialist	Mary Maciel 7th Language Arts, Language Workshop, 8th Exploratory Wheel
Margaret Maltresean 6th Language Arts, Social Studies, Language Workshop	Eric Mills Language Arts Department Chair, 8th Language Arts, Social Studies, Language Workshop	Paul Myers Webmaster, 8th Science
Tom Neilbarth 7th, 8th Exploratory Wheel, Band	Elaine Parham 6th Math, Science, Exploratory Wheel	Linda Perez 6th, 7th, 8th Exploratory Wheel
Sharon Pena 6th, 7th, 8th Exploratory Wheel	Liz Rios 7th Language Arts, Social Studies, Science	Terry Ross 7th Language Arts, Social Studies, Language Workshop

MR. MILLS - Rm. 16 online info.

The following is a schedule of classwork and homework for the week of 5/7

Progress Reports pink slips are due by Wed. 5/9

SAT9 testing in math classes this week.

Language Arts:

Learn and define 40 literary terms.
Write definitions and study for test on Friday.
HW each day will relate to these 40 words.

LAWS:

Review writing process for upcoming district writing assessments
Work on all week. Writing rough draft, self-editing, revising and writing final draft.
No additional homework.

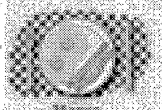
Social Studies:

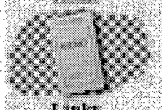
Henry Ford
Reconstruction - Chapter 13
The Immigrant Experience
Number Problems Extra Credit to help with math testing.

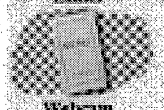
Click on Mr. Mills to send me an email.

Back to the CMS teachers page.

Mr. Myers' Website







Welcome to my class website.

To manuever around the site, click on the menu items at the left.

SAT9 testing week at CMS. Classes are longer to accomodate testing.

- This week, students will conduct an experiment on household products they use frequently to discover whether they are acid or basic compounds. After the lab, they will answer questions 1-4 on pages 615, 621, & 626. These pages will be collected on the next scheduled day back during this week.
- Students created a new substance by mixing starch and white glue together to form "Goop." This substance resembles a higly viscous liquid, basically resembling the substance Gak that you can buy at the store.
- Students should read pages 666-678 in their textbook dealing with chemical bonding, carbon style.
- In class, students will answer questions 241-250 in their workbook.

Class activites section will be expanded as the week progresses.

Promotional Activities Packets for the end-of-the year activities were passed out in Science this week. Packets are due back to 8th grade Science teachers no later than June 4, 2001. **There are no exceptions.**

- Students and parents must sign the bottom of the rules letter; keep the top and return the bottom.
- Bus permission forms must be completely filled out. Please list a phone number where a parent or guardian can be reached during the hours of the Knott's trip. **Keep both portions together.**
- The receipt needs to be filled out; it will be returned to you after your payment has been recorded.
- The Celebration letter needs to be signed at the bottom; please keep the top and return the signed bottom portion only.

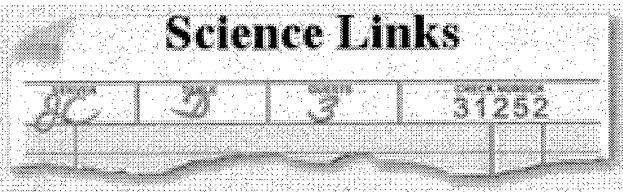
If you have any questions, feel free to email me by clicking on Mr. Myers.

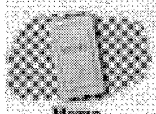
This page was last updated May 11th, 2001.

Back to the CMS Teacher page.

[Home] [Links] [Webcam]

Science Links

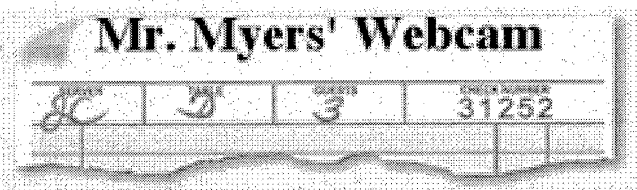


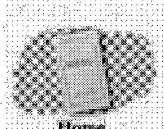


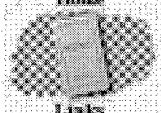
This page contains numerous educational pages dedicated to various topics in Science. They have been screened for good content, but if you notice any objectional material, please notify Mr. Myers and he will remove them from this list.

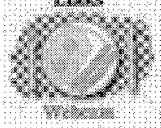
Bill Nye the Science Guy
Bringing Chemistry Alive
California and Nevada Earthquake page
California Science Center
The Exploratorium Homepage
The Franklin Institue Science Museum
Hubble Space Telescope Public Pictures
The Lawrence Hall of Science - located at the University of California, Berkeley
NASA Human Space Flight Page
The National Oceanic & Atmospheric Administration - Weather at its best.
The Nine Planets
The Smithsonian Institution
Volcano World
The Whole Frog Project - dissect a frog virtually.

Mr. Myers' Webcam

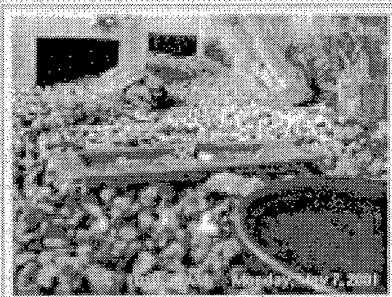






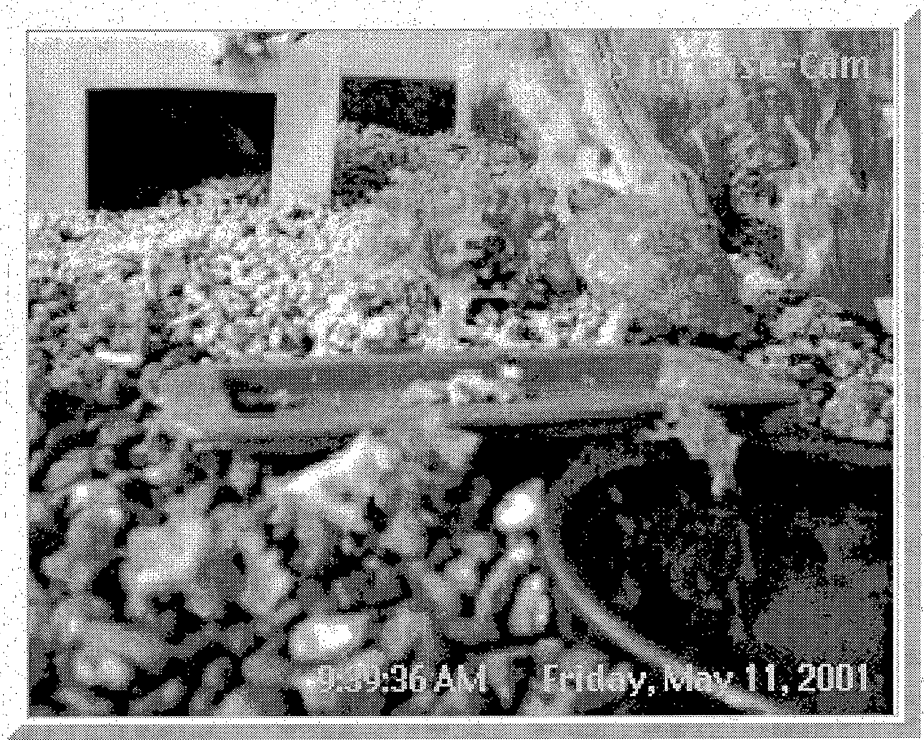


Welcome to Mr. Myers' Webcam page. This page features webcams situated inside Mr. Myers' classroom.

CMS Tortoise-Cam	CMS Snake-Cam
	Coming Soon!

These webcams take individual pictures of desert tortoises and a corn snake. Click on a picture to see the animals in action.

Welcome to the CMS Tortoise-Cam



This WebCam should refresh every forty seconds.

APPENDIX D

FOLLOW-UP E-MAIL QUESTIONNAIRES

From :
Paul Myers
Subject :
Follow-up questions regarding School Web Page
Date :
Fri, 18 May 2001 15:19:22 -0700
Reply Reply All Forward Delete **Printer Friendly Version**

Hello.

This e-mail has been sent to you because you have expressed an interest in the Cucamonga Middle School home page. This is a follow-up questionnaire to the parent survey, which was sent out to all parents of 6th and 7th grade students at Cucamonga Middle School regarding the school's web page.

Please take a few minutes and reply to the following questions. Please feel free to add any additional comments you have at the bottom of your reply.

Please respond by the end of the first week in June.

Thank you.

Sincerely,

Paul Myers
Webmaster, Cucamonga Middle School
http://www.csd.k12.ca.us/cucamonga

In your estimation, did the pages load quickly?

Is the new layout of the pages easy to follow and read?

How easy is it to navigate between the different pages on the web page?

Do the link names make sense?

Was it easy to find the teacher section?

Did you find the information on the individual teacher pages helpful?

Could you make other suggestions to improve the teacher section?

If updated on a regular basis, would you continue to utilize the teacher's pages? Why/why not?

From :
Paul Myers
Subject :
Follow-up questions regarding School Web Page
Date :
Fri, 18 May 2001 15:34:22 -0700
Reply Reply All Forward Delete **Printer Friendly Version**

Hello.

This e-mail has been sent to you because you are a teacher at Cucamonga Middle School and have an interest in technology. This is a follow-up questionnaire to the parent survey, which was sent out to all parents of 6th and 7th grade students at Cucamonga Middle School regarding the school's web page.

Please take a few minutes and reply to the following questions. Please feel free to add any additional comments you have at the bottom of your reply.

Please respond by the end of the first week in June.

Thank you.

Sincerely,

Paul Myers
Webmaster, Cucamonga Middle School
http://www.csd.k12.ca.us/cucamonga

In your estimation, did the pages load quickly?

Is the new layout of the pages easy to follow and read?

How easy is it to navigate between the different pages on the web page?

Do the link names make sense?

Was it easy to find the teacher section?

Did you find the information on the individual teacher pages helpful?

Could you make other suggestions to improve the teacher section?

Do you think you will be able to utilize the teacher pages with your students and parents in the future? Why/why not?

REFERENCES

Adobe Acrobat (version 4.0) [Computer software]. (1999). San Jose, CA: Adobe Systems Incorporated.

Adobe PageMill (version 2.0) [Computer software]. (1996). San Jose, CA: Adobe Systems Incorporated.

Berg, S., Benz, C. R., Lasley, II, T. J., & Raisch, C. D. (1998, Winter). Exemplary technology use in elementary classrooms. Journal of Research on Computing in Education, 31(2). 111-122.

Caine, R. N., & Caine, G. (1997). Education on the edge of possibility. Alexandria, Virginia: Association for Supervision and Curriculum Development.

Cameron, C. A., & Lee, K. (1997, Jan/Feb). Bridging the gap between home and school with voice-mail technology. Journal of Educational Research, 90(3). 182-191.

Chiero, R. T. (1997, Winter). Teachers' perspectives on factors that affect computer use. Journal of Research on Computing in Education, 30(2). 133-146.

Collins, S. E. (2001). September 1994 Web66 Registry of School Web Sites. Retrieved February 10, 2001, from the University of Minnesota, College of Education Web site: http://web66.coled.umn.edu/schools/stats/Jan95.html

Crippen, K., & Brooks, D. W. (1999, November). From classroom to homepage. The Science Teacher, 66(8). 50-52.

Dalton, B. (2000, May). To see one another more clearly: a Pacific children's literature web project. Reading Teacher, 53(8). 684-694.

Department of Commerce. (2000). Falling through the net: toward digital inclusion. Retrieved January 15, 2001, from the Department of Commerce Web site: http://search.ntia.doc.gov/pdf/fttn00.pdf

Department of Education. (1994). Goals 2000: educate America act. Retrieved March 12, 2001, from the Department of Education Web site: http://www.ed.gov/legislation/GOALS2000/TheAct/sec102.html

Dupagne, M., & Krendl, K. A. (1992, Spring). Teachers' attitudes toward computers: a review of the literature. Journal of Research on Computing in Education, 24(3). 420-430.

Flash [Computer software]. (2001). San Francisco, CA: Macromedia, Inc.

Gamas, W., & Nordquist, N. (1997, November). Expanding learning opportunities through on-line technology. NASSP Bulletin, 81(592). 16-22

Gardner, T. M. (1999). School web sites: are they effective at communicating to the public or just the newest trend? (Masters Thesis, California State University, San Bernardino).

Gilmore, A. (1995, Spring). Turning teachers on to computers: evaluation of a teacher development program. Journal of Research on Computing in Education, 27(3). 251-270.

Grabe, M., & Grabe, C. (1998). Integrating technology for meaningful learning (2nd ed.). New York: Houghton Mifflin Company.

Grimes, D. J., & Boening, C. H. (2001, January). Worries with the web: a look at student use of web resources. College & Research Libraries, 62(1), 11-23.

Gutzman, A. D. (2000, November). Living with the eight seconds rule. Retrieved February 16, 2001, from the Ecommerce Guide Web site: http://ecommerce.internet.com/solutions/tech_advisor/article/0,,9561_518111,00.html

Jaber, W. E., & Moore, D. M. (1999). A survey of factors which influence teachers' use of computer-based technology. International Journal of Instructional Media, 26(3). 253-267.

Java [Computer Software]. (2001). Palo Alto, CA: Sun Microsystems, Inc.

Jonassen, D. H. (1996). Computers in the classroom: mindtools for critical thinking. Englewood Cliffs, New Jersey: Prentice Hall.

Liao, Y. C. (1998, Summer). Effects of hypermedia versus traditional instruction on students' achievement: a meta-analysis. Journal of Research on Computing in Education, 30(4). 341-360.

Liu, X., Macmillan, R., & Timmons, V. (1998, Winter). Assessing the impact of computer integration on students. Journal of Research on Computing in Education, 31(2). 189-204.

Marcinkiewicz, H. R. (1994, Winter). Computer and teachers: factors influencing computer use in the classroom. Journal of Research on Computing in Education, 26(2). 220-236.

Marcinkiewicz, H. R. (1995, Winter). Differences in computer use of practicing versus preservice teachers. Journal of Research on Computing in Education, 27(2). 184-198.

Matthews, J. (1996). Fetch (version 3.01) [Computer software]. Hanover, NH: Fetch Softworks.

Merrill, P. F., Hammons, K., Vincent, B. R., Reynolds, P. L., Christensen, L., & Tolman, M. N. (1996). Computers in education (3rd ed.). Boston: Allyn and Bacon.

Meyer, R. (2000, Fall). It takes a cyber village. Library Journal Net Connect Supplement. 20-26.

Mioduser, D., Nachmias, R., Lahav, O., & Oren, A. (2000, Fall). Web-based learning environments: current pedagogical and technological state. Journal of Research on Computing in Education, 33(1). 55-77.

Mitra, A. (1998, Spring). Categories of computer use and their relationships with attitudes toward computers. Journal of Research on Computing in Education, 30(3). 281-296.

Morris, B. R. (2000, February 17). Logging on to find out what's going on at school. The New York Times, p. G9.

Mowrer-Popiel, E., Pollard, C., & Pollard, R. (1994, June). An analysis of the perceptions of preservice teachers toward technology and its use in the classroom. Journal of Instructional Psychology, 21(2). 131-139.

National Park Service. (2001). The old faithful geyser webcam - yellowstone national park. Retrieved January 3, 2001 from the National Park Service Web site: http://www.nps.gov/yell/oldfaithfulcam.htm

Netscape Communicator (version 4.73) [Computer software]. (2001). Mountain View, CA: Netscape Communications Corporation.

Reed, W. M., & Ayersman, D. J. (1995, Spring). The effect of hypermedia instruction on stages of concern of students with varying authoring language and prior hypermedia experience. Journal of Research on Computing in Education, 27(3). 297-318.

Rush, L. (Ed.). (2001). E-Commerce guide's webopedia definitions and links. Retrieved March 29, 2001, from: http://e-comm.webopedia.com/TERM/f/fiber_optics.html

Rush, L. (Ed.). (2001). E-Commerce guide's webopedia definition and links. Retrieved March 29, 2001, from: http://e-comm.webopedia.com/TERM/l/ local_area_network_LAN.html

Rush, L. (Ed.). (2001). E-Commerce guide's webopedia definition and links. Retrieved March 29, 2001, from: http://e-comm.webopedia.com/TERM/p/page_view.html

Rush, L. (Ed.). (2001). E-Commerce guide's webopdedia definition and links. Retrieved March 29, 2001, from: http://e-comm.webopedia.com/TERM/T/T_1_carrier.html

Rush, L. (Ed.). (2001). E-Commerce guide's webopdedia definition and links. Retrieved March 29, 2001, from: http://e-comm.webopedia.com/TERM/w/ wide_area_network_WAN.html

Scheffler, F. L., & Logan, J. P. (1999, Spring). Computer technology in schools: what teachers should know and be able to do. Journal of Research on Computing in Education, 31(3). 305-327.

Solem, M. N. (2000, November). The virtual geography department: assessing an agent of change in geography. Journal of Geography in Higher Education, 24(3). 353-365.

Swick, K. J., & Broadway, F. (1997, March). Parental efficacy and successful parent involvement. Journal of Instructional Psychology, 24(1). 69-76.

Terry, T. M. (1999, September). Weaving the web into biology teaching. Bioscience, 49(9). 733-742.

Terry, W., Greenblatt, E., Hashert, C., & Rossignol, L. R. (1999). Build it so they will come: blueprints for successful webpage development. The Serials Librarian, 36(3/4). 523-528.

TheCounter.com: the full-featured web counter with graphic reports and detailed information. (n.d.). Retrieved April 2, 2001, from: http://www.thecounter.com

Tiger Mapping Service. (1990). Census tracts by family income. Retrieved April 10, 2001, from United States Census Bureau Web site: http://tiger.census.gov/cgi-bin/mapsurfer?infact=2&outfact=2&act=move&tlevel=tracts&tvar=income&tmeth=i&mlat=34.107039&mlon=-117.59408&msym=redpin&mlabel=91730+%28Rancho&murl=&lat=34.10704&lon=-117.59408&wid=0.100&ht=0.100&conf=mapnew.con

Trinkle, D. A., & Merriman, S. A. (2000). The history highway 2000: a guide to internet resources (2nd ed.). Armonk, New York: M. E. Sharpe.

The VR Worx (version 2.0) [Computer software]. (2000). Pittsburgh, PA: VR Toolbox, Inc.

Walters, J. E., & Necessary, J. R. (1996, Summer). An attitudinal comparison between underclassmen and graduating seniors. Education, 166(4). 623-632.

Weinstein, P., & McKenzie, J. (1997, January). Tips and tools for building a school website. Technology & Learning, 17(4). 25-32.

Williams, Jr., S. B. (1997, November). Web sites can be an asset for school information. NASSP Bulletin, 81(592), 111-113.

Zirkle, C., & Guan, S. (2000, May). The journey into distance education. Techniques: Connecting Education & Careers, 75(5). 18-22.